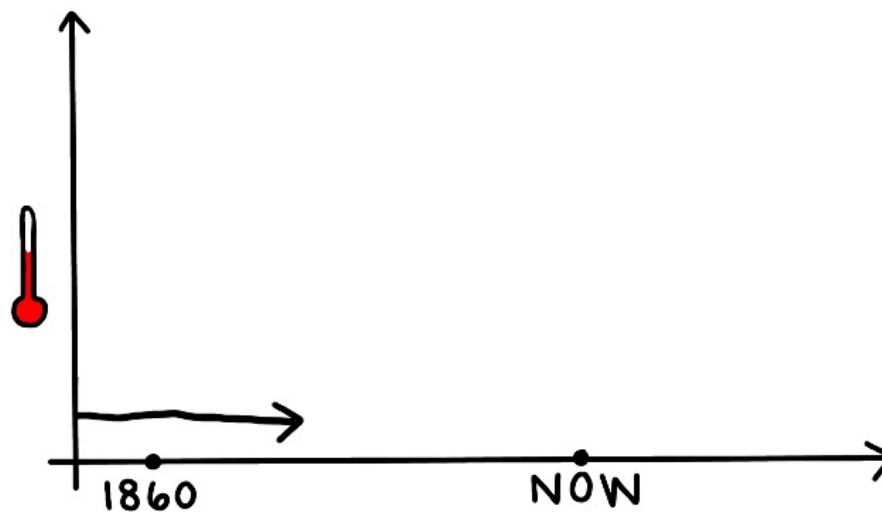


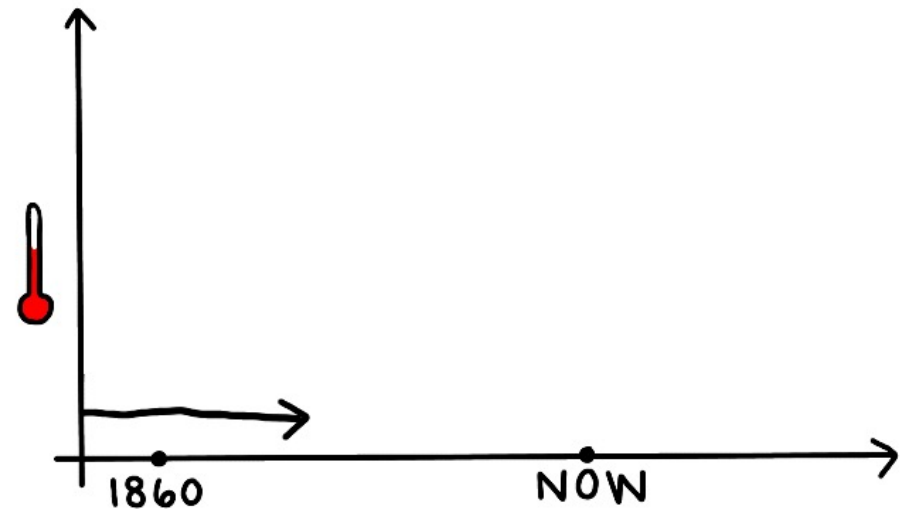
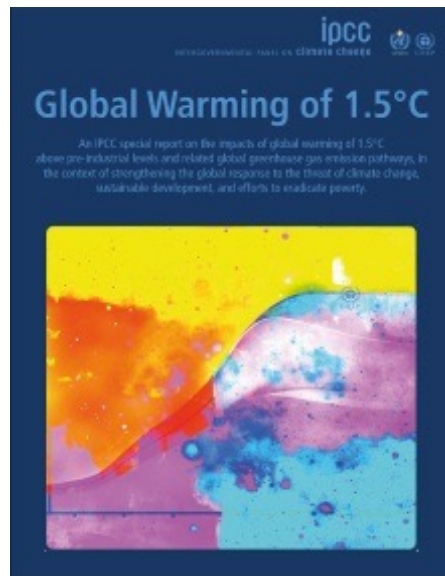
# COP26: Is There Hope for Two Degrees of Warming?



Dr. C. Mark Eakin  
Warner Memorial Presbyterian Church

# 1.5° vs 2°C of Warming (2.7° vs 3.6°F)

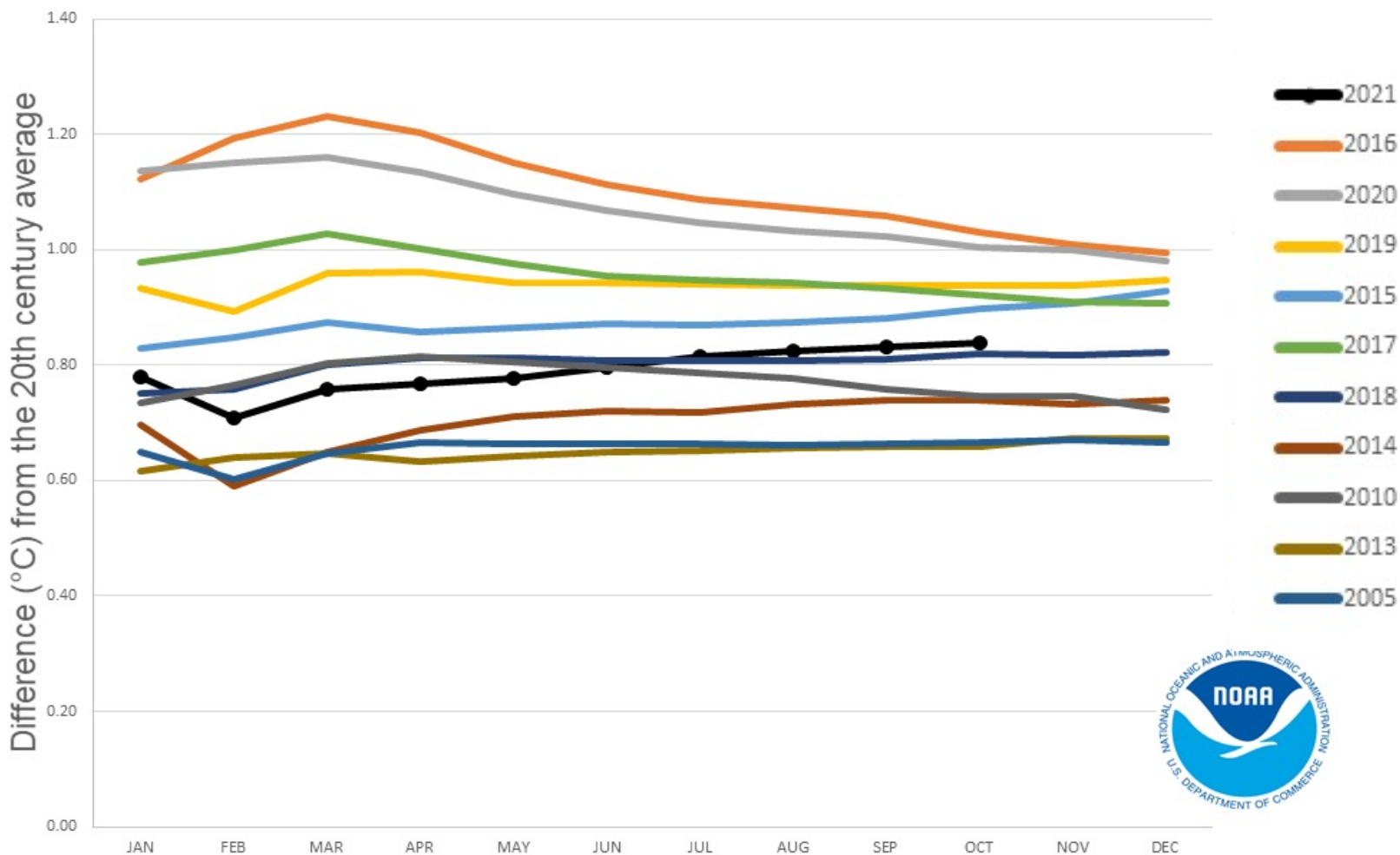
IPCC Special Report on Global Warming of 1.5°C



Why Half a Degree of Global Warming Is a Big Deal  
By Brad Plumer and Nadja Popovich, Illustrations by Iris Gottlieb  
New York Times OCT. 7, 2018

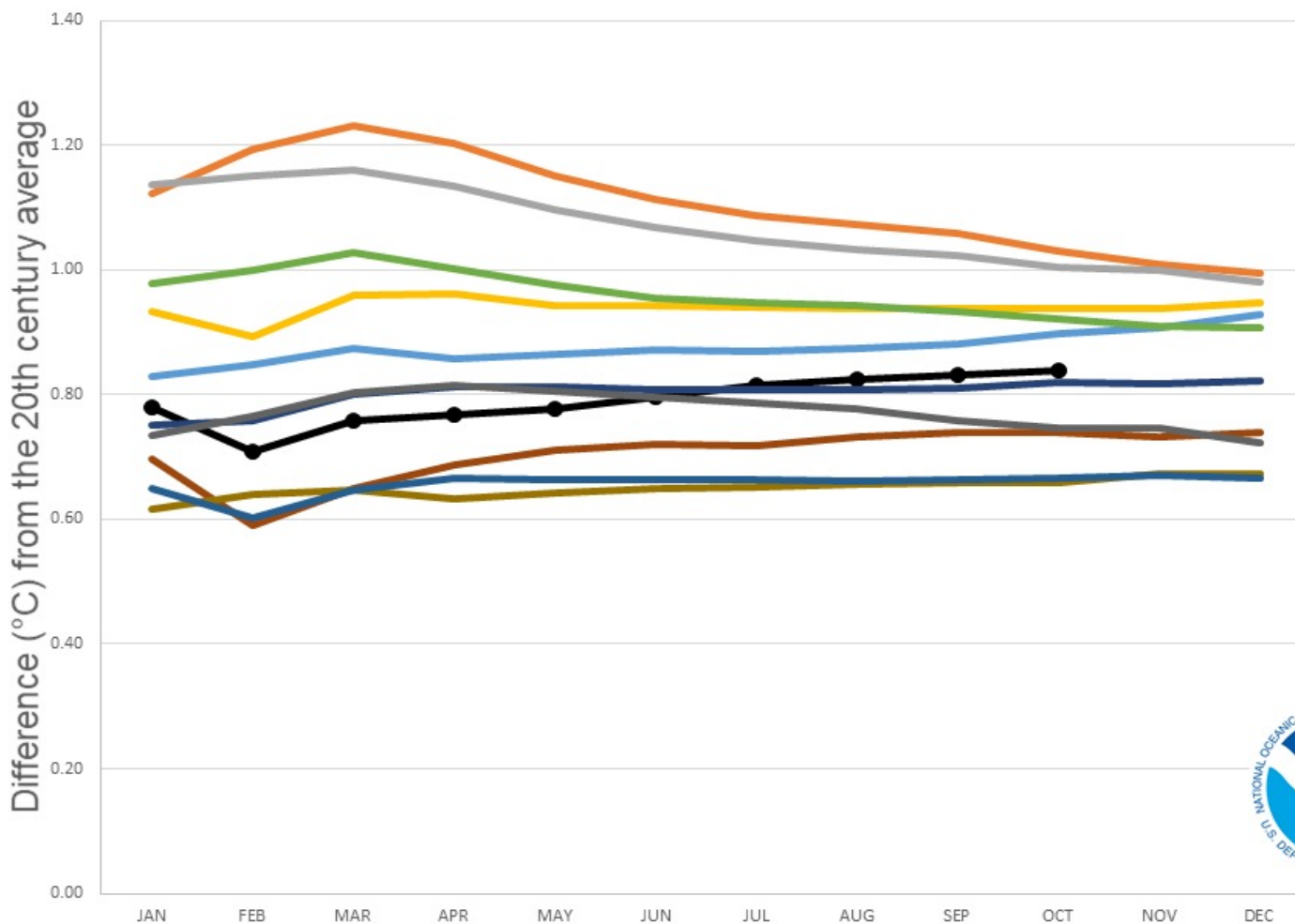
# Year-to-Date Global Temperatures

for 2021 and the ten warmest years on record



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for 2021 and the ten warmest years on record

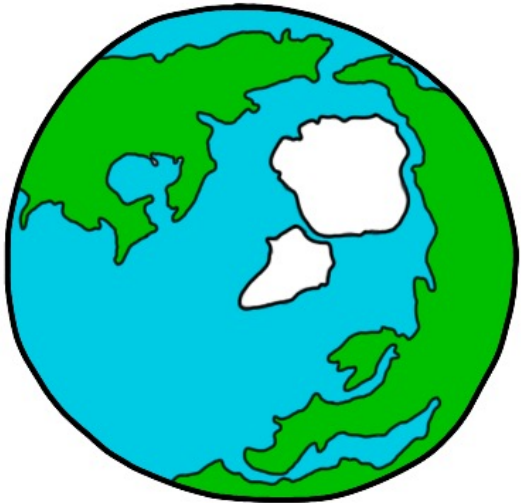


**Anyone 45 or younger, global temperatures have been warmer than average every year of your life**



# 1.5° vs 2°C of Warming (2.7° vs 3.6°F)

Ice-free summers are 10 times more likely at  
2°C than 1.5°C

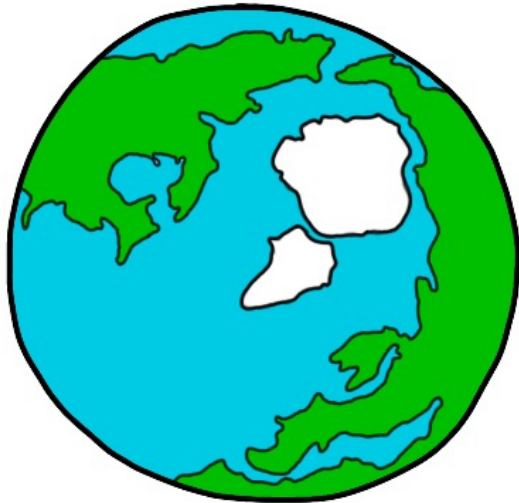


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Extreme heat waves impact  
1.5°C 14% of world population  
2°C 37%



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# 1.5° vs 2°C of Warming (2.7° vs 3.6°F)

Population exposed to flooding from sea level rise in 2100:

1.5° 31 to 69 million people worldwide

2°C up to 80 million people worldwide



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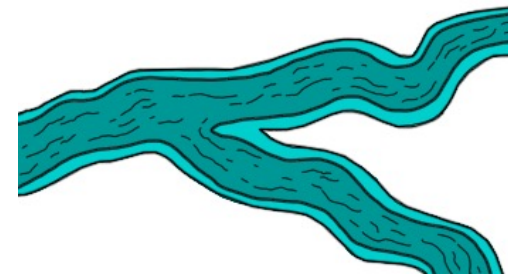
**2°C** up to 80 million people worldwide



Increase in urban population exposed to severe drought:

**1.5°C** +350 million people worldwide

**2°C** +411 million people worldwide



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Global crop yields are expected to be lower under 2°C of warming compared to 1.5°C



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Species losing more than half of their range:  
1.5°C lose 6% of insects, 8% of plants,  
2°C lose 18% of insects, 16% of plants



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# A Little History

- Rio 1992: The **United Nations Framework Convention on Climate Change (UNFCCC)** established an international environmental treaty to combat "dangerous human interference with the climate system"
- Kyoto 1997 – COP3: The Kyoto Protocol, which ran from 2005 to 2020, was the first implementation of measures under the UNFCCC.
- Paris 2015 – COP21: Limit warming below 2C and strive to keep temperatures at 1.5C above pre-industrial levels
- Glasgow 2021 – COP26: Under the Paris Agreement, countries must increase their ambition every five years (delayed due to COVID-19)

## Pre-Glasgow

# Opinion: The smart money on climate seems to be barely mitigated doom



U.N. Secretary General António Guterres delivers a speech during the the U.N. conference on climate change, COP26, in Glasgow, Scotland, on Nov. 1. (Yves Herman/Pool/AP)



By Eugene Robinson

Columnist | + Follow



November 1, 2021 at 3:14 p.m. EDT

“I leave Rome with my hopes unfulfilled — but at least they are not buried,”

- António Guterres  
U.N. Secretary General

# Pre-Glasgow



“We’re gaining momentum but far behind.”

- Achim Steiner

UN Development Programme Administrator

3 Nov. 2021

# Post-Glasgow

“We all know that old adage, you can't let perfect be the enemy of the good”



- John Kerry  
Special Presidential Climate Envoy  
13 Nov. 2021

# Post-Glasgow

“We all know that old adage, you can't let perfect be the enemy of the good”

“we are in fact, closer than we have ever been before to avoiding climate chaos and securing cleaner air, safer water and [a] healthier planet.”

- John Kerry

Special Presidential Climate Envoy

13 Nov. 2021

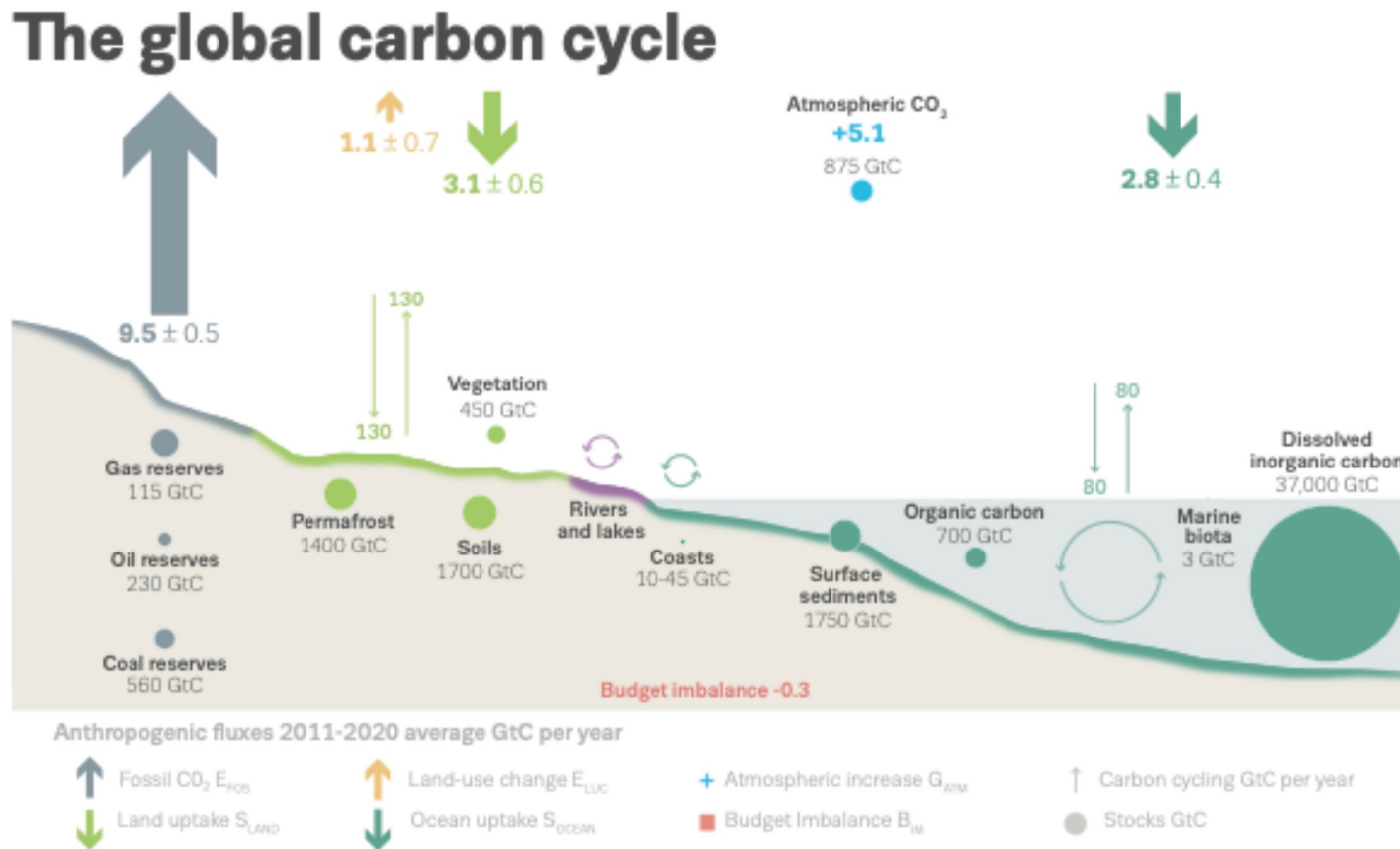


# What Did We Get in Glasgow?

Issue	Target	Agreement
Coal	Phase out coal	Phase down unabated coal (But acknowledged need to transition off fossil fuels)
Subsidies	End fossil fuels subsidies	Phase out inefficient fossil fuel subsidies
Emission reductions	Distant net zero targets	Almost 50% reduction in next decade
	Emissions need to fall around 45% by 2030	emissions expected to rise almost 14% by 2030
Cost on Carbon		Rules for global carbon markets
Loss and damage	Payments to vulnerable countries	Start a dialogue
Climate Fund	\$100B/year by 2020	\$100B/year by 2023 Make-up payments by 2025
Climate target	1.5°C	< 2°C? (but was nearly 4°C)
Updating nationally determined contributions	Updates required 2021	Most countries updated NDCs
	5-year updates	Requested to revisit and strengthen NDCs in 2022
Methane		100 countries signed Global Methane Pledge – 30% reduction
Deforestation		Pledge to halt deforestation by 2030

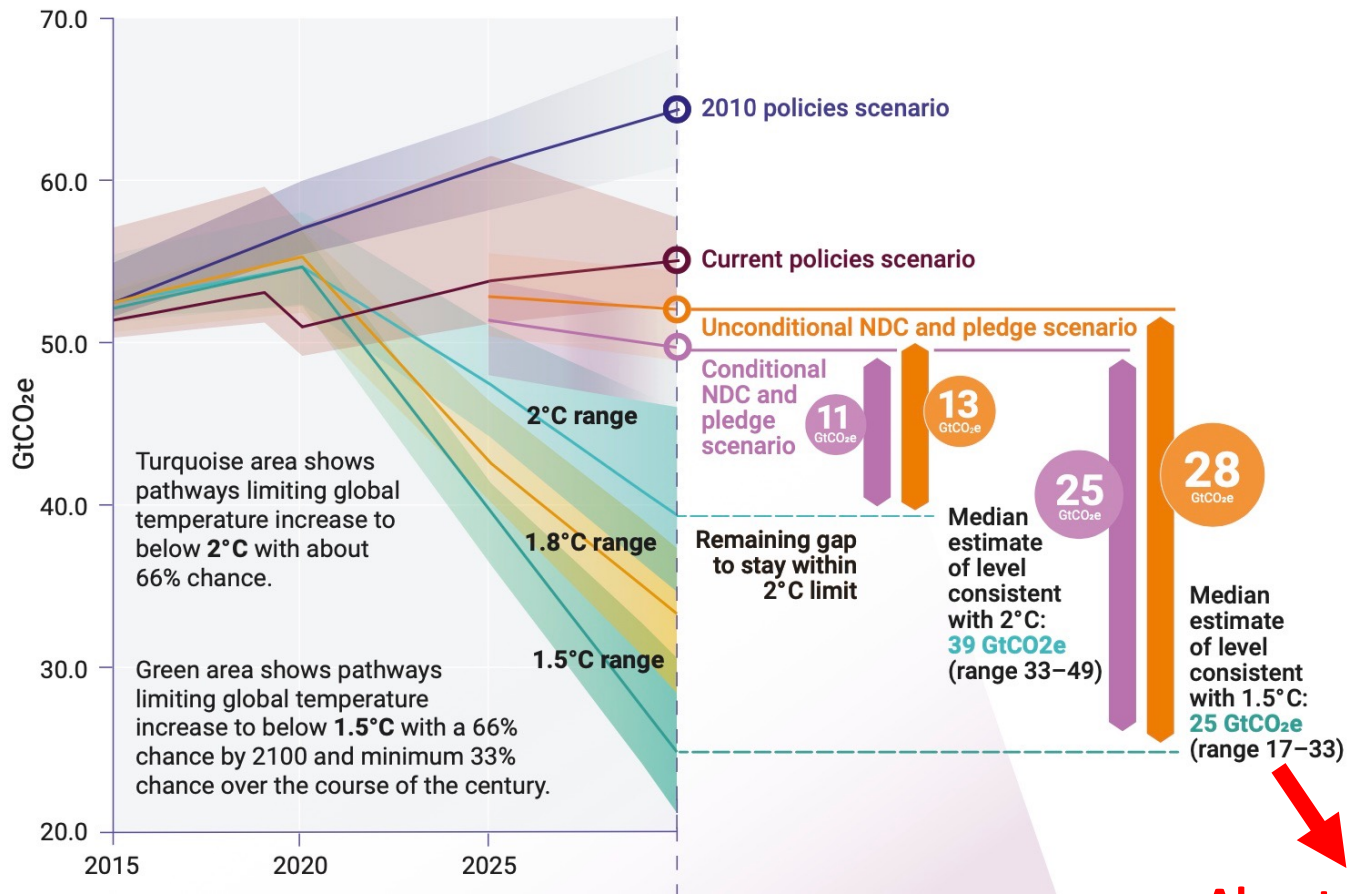


# Global Carbon Budget



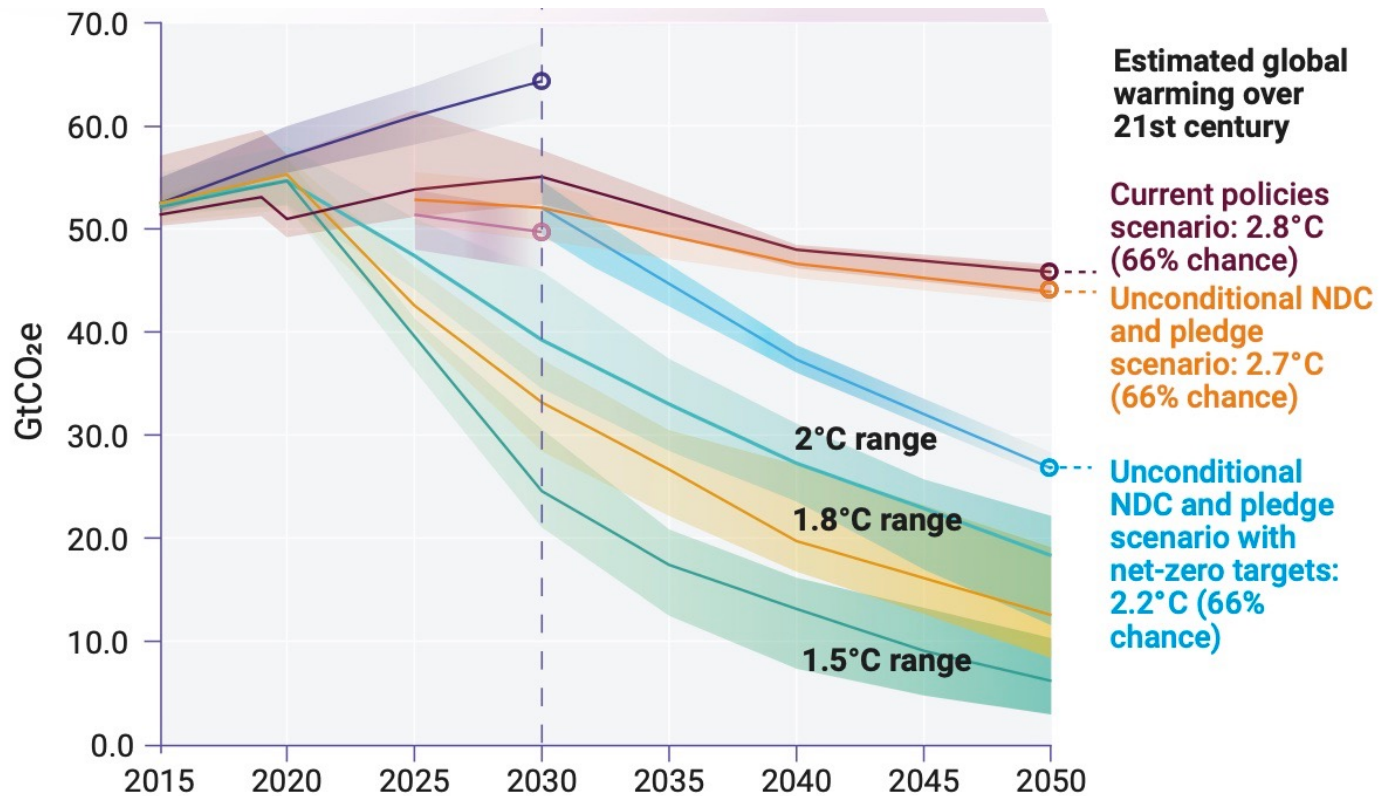
<https://doi.org/10.5194/essd-2021-386>

# Where are we post-Glasgow

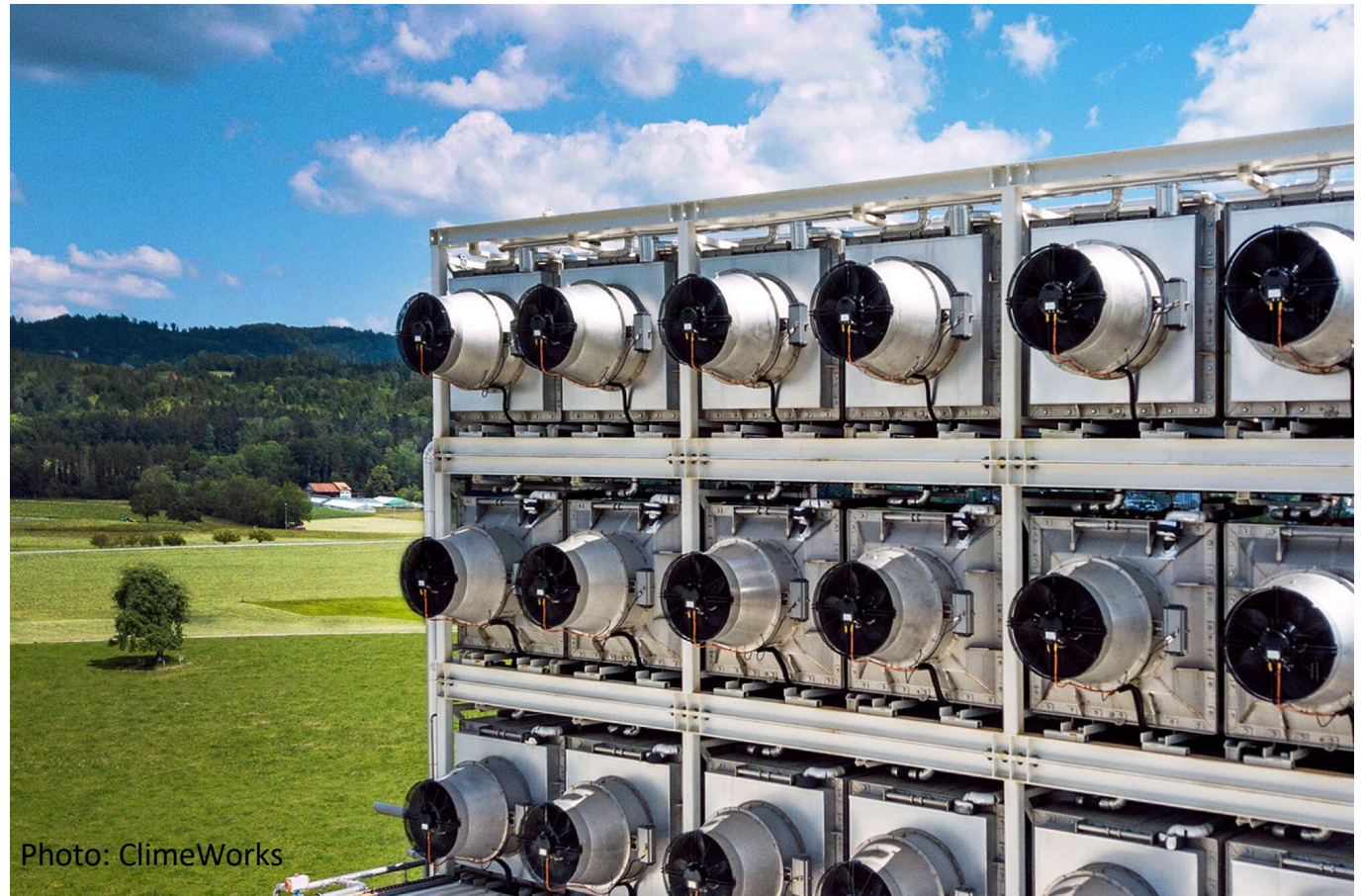


**About 430 ppm CO<sub>2e</sub>  
Now at ~410 ppm CO<sub>2</sub>**

# Where are we post-Glasgow



# Either 1.5° or 2° C Requires Negative Emissions Carbon Capture and Storage



# Either 1.5° or 2° C Requires Negative Emissions Carbon Capture and Storage

"No more dumping into the trash dump of the sky without paying tipping fees for the damages you're causing there."

- Bob Inglis

Six-term former Republican congressman from South Carolina

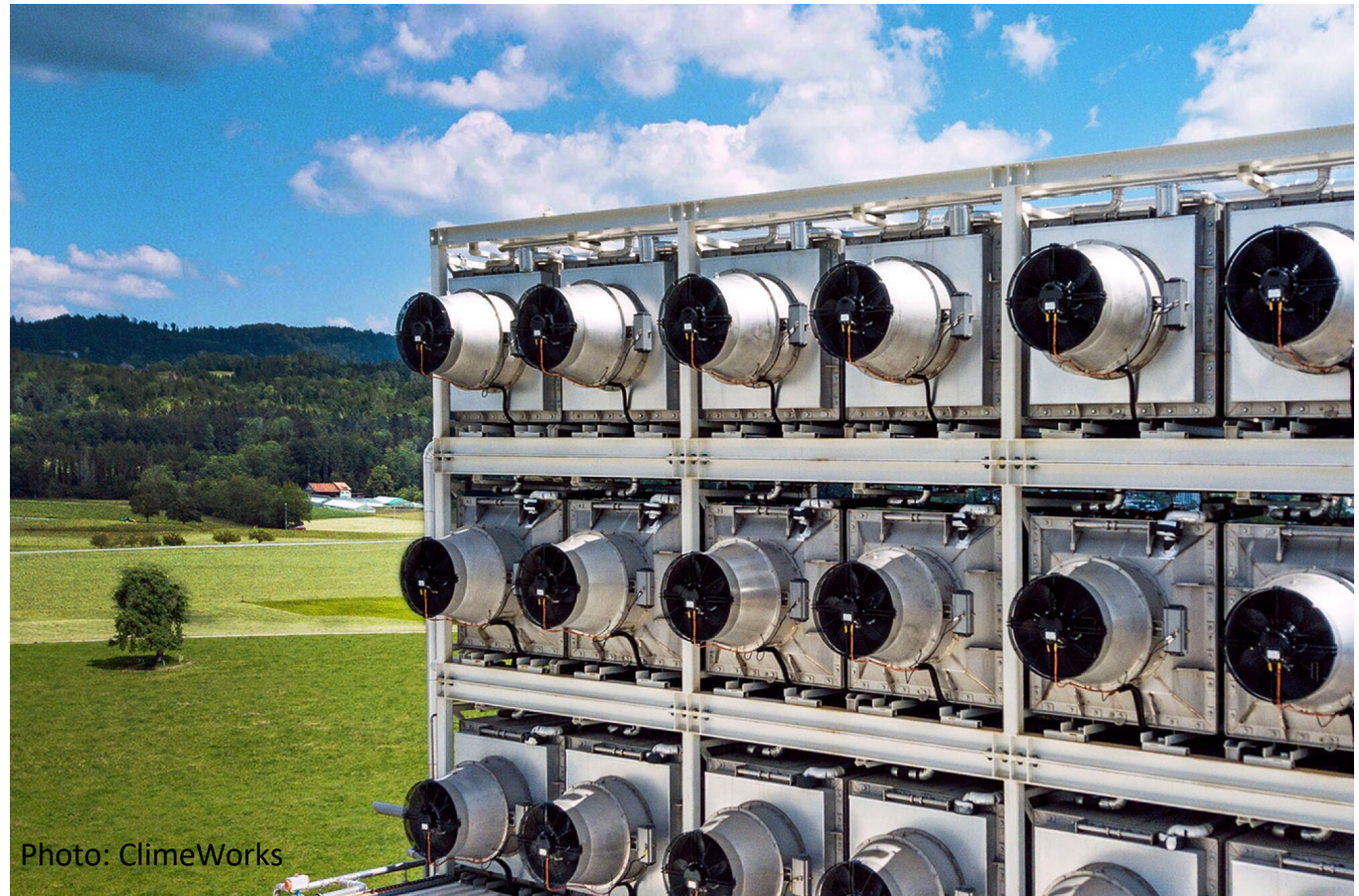
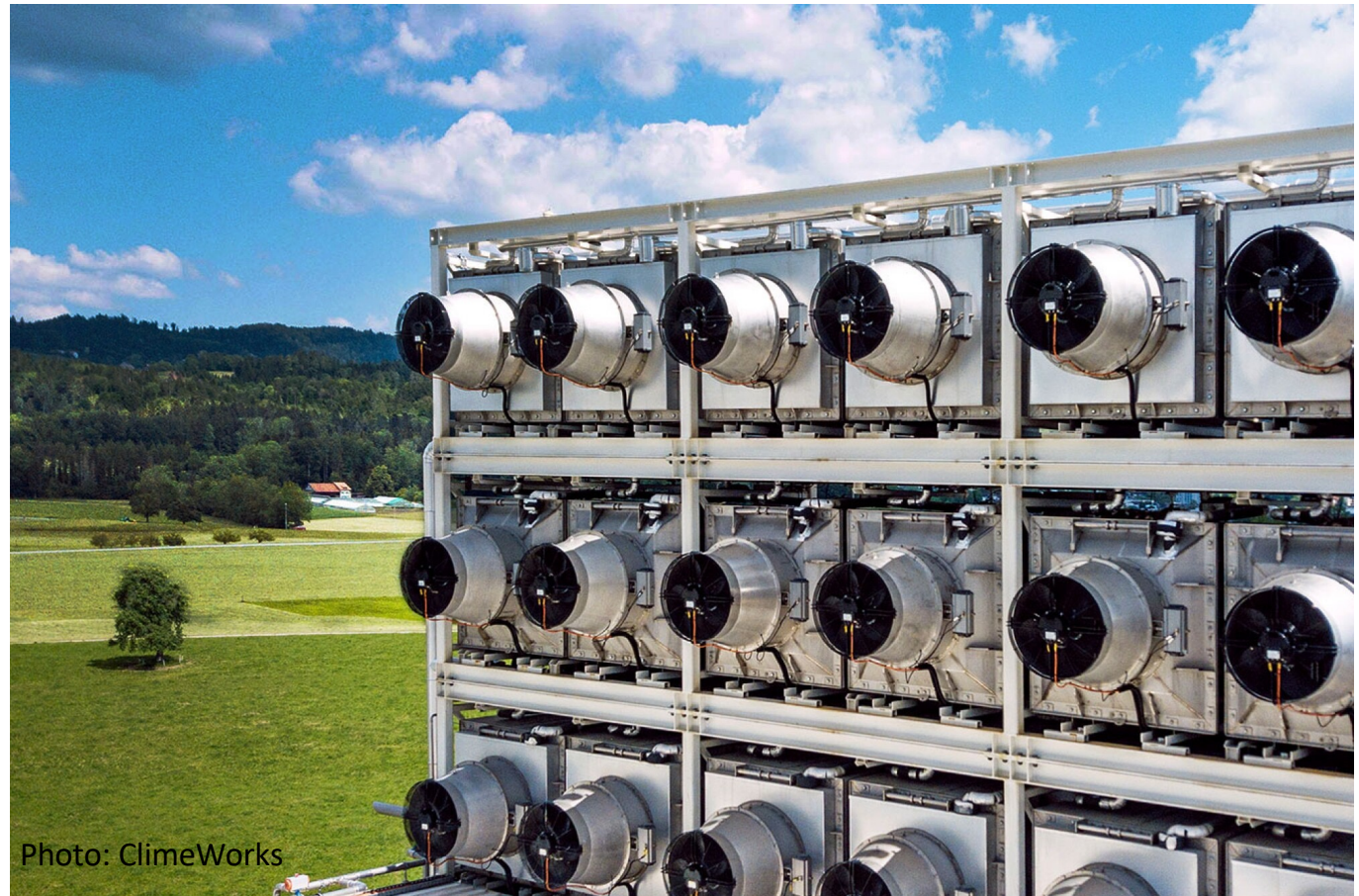


Photo: ClimeWorks

# Either 1.5° or 2° C Requires Negative Emissions Carbon Capture and Storage

- Overture “On Supporting Carbon Pricing” passed General Assembly 223 St. Louis



# We Can All Do Our Part

**For God's good creation.**

With faith.  
With hope.  
With urgency.



- Overture to General Assembly asking PC(USA) to divest from fossil fuels
- “Overture” your Presbytery to divest
- Have your church divest